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Database and Expert Systems Applications, 1999. Proceedings. Tenth International Workshop on, 1-3 Sept. 1999

Pages:426 - 432

[\[Abstract\]](#) [\[PDF Full-Text \(72 KB\)\]](#) **IEEE CNF****2 Accessing to spatial data in mobile environment***Stockus, A.; Bouju, A.; Bertrand, F.; Boursier, P.;*

Web Information Systems Engineering, 2001. Proceedings of the Second International Conference on, Volume: 2, 3-6 Dec. 2001

Pages:57 - 65 vol.2

[\[Abstract\]](#) [\[PDF Full-Text \(851 KB\)\]](#) **IEEE CNF****3 An infrastructure for scalable parallel multidimensional analysis***Goil, S.; Choudhary, A.;*

Scientific and Statistical Database Management, 1999. Eleventh International Conference on, 28-30 July 1999

Pages:102 - 111

[\[Abstract\]](#) [\[PDF Full-Text \(236 KB\)\]](#) **IEEE CNF****4 QEM: a scheduling method for wireless broadcast data***Yon Dohn Chung; Myoung Ho Kim;*

Database Systems for Advanced Applications, 1999. Proceedings., 6th International Conference on, 19-21 April 1999

Pages:135 - 142

Terms used **'update data set' AND mobile AND WAP**

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Relevance scale **1 Customising WAP-based information services on mobile networks**

Wei-Po Lee, Cheng-Che Lu

December 2003 **Personal and Ubiquitous Computing**, Volume 7 Issue 6Full text available:  [pdf\(527.85 KB\)](#) Additional Information: [full citation](#), [abstract](#)

In addition to voice transmission over mobile networks, the demand of data communication has been increasing. To deploy data-oriented applications for mobile terminals, the wireless application protocol (WAP) has provided a promising solution. However, as in the World Wide Web (WWW), the increasing information leads to the problem of information overload. One way to overcome such a problem is to build intelligent recommender systems to provide customised information services. By analyzing the in ...

Keywords: Customisation, Machine learning, Mobile information services, Software agents, WAP devices

2 Improving mobile internet usability

George Buchanan, Sarah Farrant, Matt Jones, Harold Thimbleby, Gary Marsden, Michael Pazzani

April 2001 **Proceedings of the tenth international conference on World Wide Web**Full text available:  [pdf\(297.71 KB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: HCI, WAP, mobile internet, usability

3 Designing applications for handheld devices: Navigating in a mobile XHTML application

Anne Kaikkonen, Virpi Roto

April 2003 **Proceedings of the conference on Human factors in computing systems**Full text available:  [pdf\(247.55 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

The Internet has been a great success in the fixed world, whereas WAP (Wireless Application Protocol), the mobile Internet, has not fulfilled its promise. However, now the analysts have started to believe in a rise of the mobile Internet again. WAP 2.0, with XHTML Mobile Profile as its standard language, will enable sites to function both in the fixed and wireless worlds. In this paper, we analyze different ways to navigate XHTML sites with mobile phones and

base our analysis on two usability ev ...

Keywords: WAP, XHTML mobile profile, mobile internet, mobile phones, navigation, wireless web

4 Security in mobile communications: challenges and opportunities

Audun Jøsang, Gunnar Sanderud

January 2003 **Proceedings of the Australasian information security workshop conference on ACSW frontiers 2003 - Volume 21**

Full text available:  pdf(117.04 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

The nature of mobile communication, characterised for example by terminals having poor user interface and limited processing capacity, as well as complex combination of network protocols, makes the design of security solutions particularly challenging. This paper discusses some of the difficulties system architects are faced with as well as some advantages mobile networks offer when designing security solutions for mobile communication.

Keywords: heterogeneous networks, mobile devices, security, usability

5 iMobile EE: an enterprise mobile service platform

Yih-Farn Chen, Huale Huang, Rittwik Jana, Trevor Jim, Matti Hiltunen, Sam John, Serban Jora, Radhakrishnan Muthumanickam, Bin Wei

July 2003 **Wireless Networks**, Volume 9 Issue 4

Full text available:  pdf(2.90 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

iMobile¹ is an enterprise mobile service platform that allows resource-limited mobile devices to communicate with each other and to securely access corporate contents and services. The original iMobile architecture consists of devlets that provide protocol interfaces to different mobile devices and infolets that access and transcode information based on device profiles. iMobile Enterprise Edition (iMobile EE) is a redesign of the original iMobile architecture to address the security, ...

Keywords: content transcoding, middleware, mobile devices, mobile enterprise, mobile multimedia services

6 Mobile commerce for financial services--killer applications or dead end?

Michael Semrau, Achim Kraiss

April 2001 **ACM SIGGROUP Bulletin**, Volume 22 Issue 1

Full text available:  pdf(469.50 KB) Additional Information: [full citation](#), [abstract](#), [index terms](#)

Since mobile commerce (m-commerce) started to be intensively discussed in the press, financial service companies are said to be the winners of m-commerce. But looking at existing m-commerce applications, you will find *really* interesting information only on few sites. In addition, there are many of these applications, which are just in a prototype state and not yet available to the customers. Based on the lessons we have learned from building prototype and productive m-commerce application ...

7 Information access and retrieval: Mobile delivery of news using hierarchical query-biased summaries

Simon O. Sweeney, Fabio Crestani, Anastasios Tombros

March 2002 **Proceedings of the 2002 ACM symposium on Applied computing**

Full text available:

Additional Information:

 pdf(607.98 KB)

[full citation](#), [abstract](#), [references](#), [index terms](#)

This paper presents the results of a study aimed at measuring the usefulness of presenting the results of an Information Retrieval search on WAP mobile phones. The experimentation focuses on presenting automatically-generated summaries of newspaper articles of increasing length on a mobile phone interface and in studying the differences in users' perception of relevance of the retrieved documents. The aim is to study experimentally how users' perception of relevance varies depending on the length ...

Keywords: WAP, document summarisation, user study

8 Condor grid computing from mobile handheld devices 

Francisco J. González-Castaño, Javier Vales-Alonso, Miron Livny, Enrique Costa-Montenegro, Luis Anido-Rifón

April 2002 **ACM SIGMOBILE Mobile Computing and Communications Review**, Volume 6 Issue 2

Full text available:  pdf(199.54 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In this paper, we propose a hierarchical design methodology for grid access from handheld devices. After determining all user interactions required and technologies available, they are arranged in layers. All functions in a layer are also supported by all underlying layers. By doing so, the designer is less conditioned by the constraints of a specific, out-of-context platform. Additionally, in a stratified modular design, many software components can be re-used. We present a prototype to access ...

9 Mobile Code and Distributed Systems: The performance of public key-enabled kerberos authentication in mobile computing applications 

Alan Harbitter, Daniel A. Menascé

November 2001 **Proceedings of the 8th ACM conference on Computer and Communications Security**

Full text available:  pdf(419.31 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Authenticating mobile computing users can require a significant amount of processing and communications resources-particularly when protocols based on public key encryption are invoked. These resource requirements can result in unacceptable response times for the user. In this paper, we analyze adaptations of the public key-enabled Kerberos network authentication protocol to a mobile platform by measuring the service time of a "skeleton" implementation and constructing a closed queuing network in ...

Keywords: authentication, kerberos, mobile computing, performance modeling, proxy servers, public key cryptography

10 Software security and privacy risks in mobile e-commerce 

Anup K. Ghosh, Tara M. Swaminatha

February 2001 **Communications of the ACM**, Volume 44 Issue 2

Full text available:  pdf(90.58 KB)  html(38.81 KB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

11 Analysis of mobile commerce market in Hong Kong 

Chi Hong LEUNG, Yuen Yan CHAN, Candy Suk Ching CHAN

September 2003 **Proceedings of the 5th international conference on Electronic commerce**

Hong Kong is one of the cities with the highest penetration rate of mobile devices in the world. There is the potential for Hong Kong to be a leader of mobile commerce. Recently, the six local mobile network operators stimulated usage of SMS to promote mobile Internet markets. In addition, the Hongkong Post launched the mobile digital certificates for community-wide adoption of mobile commerce. However, the customers are not buying what might be expected, and mobile commerce is a relatively new ...

Keywords: communication standard, information market, marketing analysis, mobile commerce, mobile e-cert, mobile network operator

12 Papers from MC²R open call: Condor grid computing from mobile handheld devices 

Francisco J. González-Castaño, Javier Vales-Alonso, Miron Livny, Enrique Costa-Montenegro, Luis Anido-Rifón

January 2003 **ACM SIGMOBILE Mobile Computing and Communications Review**, Volume 7

Issue 1

In this paper, we propose a hierarchical design methodology for grid access from handheld devices. After determining all user interactions required and technologies available, they are arranged in layers. All functions in a layer are also supported by all underlying layers. By doing so, the designer is less conditioned by the constraints of a specific, out-of-context platform. Additionally, in a stratified modular design, many software components can be re-used. We present a prototype to access ...

13 On-line instructional testing in a mobile environment 

Cerise Wuthrich, Gail Kalbfleisch, Terry Griffin, Nelson Passos

April 2003 **The Journal of Computing in Small Colleges**, Volume 18 Issue 4

Wireless access to the Internet has opened the door to a new range of computer applications, designed to satisfy the requirement of the mobile user, equipped with a personal digital assistant or cell phone device. In the educational field, the mobile communication environment allows students to access registrar records, enter enrollment information, obtain grades, etc. This paper describes the use of mobile devices in helping students prepare for knowledge tests and required concepts, followed b ...

14 Characteristics of WAP traffic 

Irene C. Y. Ma, James Irvine

January 2004 **Wireless Networks**, Volume 10 Issue 1

This paper considers the characteristics of Wireless Application Protocol (WAP) traffic. We start by constructing a WAP traffic model by analysing the behaviour of users accessing public WAP sites via a monitoring system. A wide range of different traffic scenarios were considered, but most of these scenarios resolve to one of two basic types. The paper then uses this traffic model to consider the effects of large quantities of WAP traffic on the core network. One traffic characteristic which is ...

Keywords: WAP, mobile data, self-similarity, traffic modelling

15 Improving TCP performance over mobile networks 

Hala Elaaraq

September 2002 **ACM Computing Surveys (CSUR)**, Volume 34 Issue 3

Full text available: [pdf\(219.39 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Transmission Control Protocol (TCP) is the most commonly used transport protocol on the Internet. All indications assure that mobile computers and their wireless communication links will be an integral part of the future internetworks. In this paper, we present how regular TCP is well tuned to react to packet loss in wired networks. We then define mobility and the problems associated with it. We discuss why regular TCP is not suitable for mobile hosts and their wireless links by p ...

Keywords: I-TCP, M-TCP, MTCP, New-Reno, Reno, SACK, TCP performance, WAP, WTCP, base station, comparison of TCP implementations, end-to-end, link layer, mobile TCP, mobile host, mobile wireless networks, mobility, snoop, split TCP, standard TCP, wired networks, wireless TCP

16 Evaluating Interface Design Choices on WAP Phones: Navigation and Selection

Luca Chittaro, Paolo Dal Cin

January 2002 **Personal and Ubiquitous Computing**, Volume 6 Issue 4

Full text available: [pdf\(220.83 KB\)](#) Additional Information: [full citation](#), [abstract](#), [index terms](#)

Wireless Application Protocol (WAP) phones are a growing relevant part of the mobile market, and the number of WAP services offered is rapidly increasing. Usability is crucial for these services, which must be easily operated on small screens and keyboards. Unfortunately, there are very few published studies on the evaluation of WAP devices and services on users. This paper presents a user study that evaluates two important interface design choices for WAP services (implementation of single-choi ...

Keywords: Evaluation, Mobile phones, User interfaces, User study, WAP

17 Mobile connectivity protocols and throughput measurements in the Ricochet

Microcellular data network (MCDN) system

Mike Ritter, Robert J. Friday, Rodrigo Garces, Weill San Filippo, Cuong-Thinh Nguyen
July 2001 **Proceedings of the 7th annual international conference on Mobile computing and networking**

Full text available: [pdf\(178.43 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We describe the protocols implemented in the Ricochet MCDN system to provide continuous connectivity to mobile users traveling up to 70 mph. These protocols are general in nature for any frequency-hopping microcell-based system, particularly those that follow the FCC part 15.247 rules [9] and operate in unlicensed spectrum. We also present throughput measurements as a function of velocity and describe a model to predict those numbers based upon the protocols implemented. The MCDN system is a ...

Keywords: MCDN system architecture, Mobility, wireless networks, wireless protocols, wireless routing

18 Computer-supported cooperative work: A service architecture for mobile teamwork

Engin Kirda, Pascal Fenkam, Gerald Reif, Harald Gall

July 2002 **Proceedings of the 14th international conference on Software engineering and knowledge engineering**

Full text available: [pdf\(92.83 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

Mobile teamwork has become an emerging requirement in the daily business of large enterprises. Employees collaborate across locations and need support while they are on the

move. Business documents (artifacts) and expertise need to be shared independent of the actual location or connectivity (e.g., access through a mobile phone, laptop, Personal Digital Assistant, etc.) of employees. Although many collaboration tools and systems exist, most do not deal with new requirements such as locating arti ...

Keywords: XML, architectures, collaborative systems, components, distributed searches, meta-data and XQL, mobile teamwork

19 [Mobile applications: Bluetooth and WAP push based location-aware mobile advertising system](#) 

Lauri Aalto, Nicklas Göthlin, Jani Korhonen, Timo Ojala

June 2004 **Proceedings of the 2nd international conference on Mobile systems, applications, and services**

Full text available:  [pdf\(469.83 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Advertising on mobile devices has large potential due to the very personal and intimate nature of the devices and high targeting possibilities. We introduce a novel B-MAD system for delivering permission-based location-aware mobile advertisements to mobile phones using Bluetooth positioning and Wireless Application Protocol (WAP) Push. We present a thorough quantitative evaluation of the system in a laboratory environment and qualitative user evaluation in form of a field trial in the real envir ...

Keywords: Bluetooth positioning, context-aware, location-aware, location-based services, mobile advertising, wireless advertising

20 [An empirical study of textual and graphical travel itinerary visualization using mobile phones](#) 

Masood Masoodian, Nicholas Lane

February 2003 **Proceedings of the Fourth Australian user interface conference on User interfaces 2003 - Volume 18**

Full text available:  [pdf\(358.10 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Mobile phones can be used to access personal and public information. Although most of these types of information are in textual form, an increasing number of service providers are also offering access to graphical information, particularly to WAP™ enabled mobile phones. This paper describes an empirical study of user access to personal travel itinerary information in both textual and graphical form. The aim of this study was to compare the effectiveness of graphical and textual visua ...

Keywords: WAP, information visualisation, mobile computing

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